

MHG 161

Ionization smoke detector

Ionization smoke detector MHG 161 is a fire detector intended for automatic signalling of arising fires in cooperation with addressable Control and Indicating Equipment LITES.



It responds to both visible and invisible smoke particles (aerosols) on the principle of detection of ionization.

The MHG 161 detector is intended for co-operation with the analogue Control and Indicating Equipments (C.I.E.) MHU 110, MHU 111, MHU 115, MHU 116, MHU 117 and with the addressable C.I.E. MHU 109. The detector contains a program that evaluates the fire situation pursuant to measuring of the surrounding smoke concentration, namely in agreement with the following adjustable characteristics:

- basic sensitivity of the detector; it monitors the surrounding smoke concentration increase compared to the quiescent state, that compensates the climatic and other influences (environs temperature, pressure etc.) continuously; the basic sensitivity can be adjusted in eight degrees that must be selected with reference to the detector's combustion gas load that the detector responds to; the basic sensitivity can be inactivated completely, or it can be set only partial.
- limit sensitivity; it monitors the surrounding smoke concentration without compensation of other influences; limit sensitivity can be adjusted in eight degrees; serves primarily for a proper function while the fire arises extremely slowly
- reaction time; it is the verification level of the fire situation; also adjustable in eight degrees, however they can't be expressed by a simple time stamp, because the reaction time depends on the time progression of the fire situation
- watching of dusty; it monitors the quiescent level of the detector, and upon this it evaluates the dustiness rate of the optical chamber and consequently the reliability of the detector; it can be adjusted in seven degrees, or inactivated; it's set considering to the dust rate around the detector and to the setting of other parameters

Further the pre-alarm sensitivity can be adjusted, it is always higher than the alarm sensitivity. The detector self regulates its internal working characteristics, if they don't reply to the allowable tolerance, fault warnings occur.

The adjustable characteristics can be set either into a configuration program and recorded to the detector through the C.I.E. or they can be programmed right by means of the preparation MHY 535.

The detector has a built-in isolator, that in case of a short-circuit separates the shortcut part between detectors with connected isolators on the circle line. The detector is installed into the mounting base MHY 734 or mounting base MHY 734.028 with an acoustic signalling. For installation it is possible to use the Mounting Bar MHY 736.

The detector fulfils the requirements of the standard ČSN EN 54-7 ..

Technical parameters

Power supply	addressable C.I.E. LITES
Optical signalling	a couple of red LED
Parallel signalling	type LITES
Smoke sensitivity according to ČSN EN 54-7	adjustable $y = 0,18 \div 0,83$ ($y = 0,33 \div 0,65$ according to ČSN EN 54-7)
Testing	test bar MHY 506 test from the C.I.E.
Protection according to ČSN EN 60529	IP 43
Radio screening degree according to ČSN EN 55 022	B-class equipment
Address setting	Addressing Preparation MHY 535 in range 1 ÷ 128
Dimensions	(Ø98 × 42) mm
Weight	around 140 g

Product is intended for operation with safe equipment in sense of ČSN EN 60950.

Working conditions

Application of the detector is in areas protected against weather conditions with classification according to ČSN EN 60721-3-3

K: climatic conditions for environment

- working temperature range
- max. relative humidity
- without condensation and ice accretion

Z: special conditions

B: biological conditions

C: chemical active substances

S: mechanical active substances

M: mechanical conditions

Duration of significant temperature ($45^{\circ}\text{C} \div 70^{\circ}\text{C}$)

Duration of significant humidity ($85\% \div 95\% / \leq 40^{\circ}\text{C}$)

Maximum duration of spraying

Air flowing

Gust of wind lasting 2-4s

Version 04/2017

3K5

$-25^{\circ}\text{C} \div +70^{\circ}\text{C}$

95 % at 40°C

3Z1 heat radiation negligible

3Z8 irrigation water

3B1 without presence of flora and fauna

3C2

3S1

3M2

2 months/year

100 hours/year

10 min/month

max. 6 ms^{-1}

max. 12 ms^{-1}